

What is claimed is:

1. A method of manufacturing a semiconductor device comprising:

(a) forming a depression in a semiconductor substrate from a first surface of the  
5 semiconductor substrate, an integrated circuit being formed in the semiconductor  
substrate;

(b) forming a conductive section in the depression;

(c) causing the conductive section to project from a second surface of the  
semiconductor substrate, the second surface being opposite to the first surface; and

10 (d) grinding or polishing the conductive section until a fresh surface of the  
conductive section is exposed.

2. The method of manufacturing a semiconductor device as defined in claim 1,  
further comprising:

15 forming an insulating layer on a bottom surface and an inner wall surface of the  
depression after the step (a) and before the step (b),

wherein the conductive section is formed inside the insulating layer in the step  
(b).

20 3. The method of manufacturing a semiconductor device as defined in claim 2,  
wherein the conductive section is caused to project in the step (c) in a state in  
which the conductive section is covered with the insulating layer, and

wherein the insulating layer and the conductive section are ground or polished in  
the step (d).

25 4. The method of manufacturing a semiconductor device as defined in claim 3,  
wherein the conductive section is caused to project from the second surface of

the semiconductor substrate in the step (c) by etching the second surface using an etchant having properties which cause the amount of etching to the semiconductor substrate to be greater than the amount of etching to the insulating layer.

5            5. The method of manufacturing a semiconductor device as defined in claim 1,  
             wherein the semiconductor substrate is a semiconductor wafer in which a  
             plurality of the integrated circuits are formed, and the depression is formed  
             corresponding to each of the integrated circuits, and  
             wherein the method further comprises cutting the semiconductor substrate.

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             6. The method of manufacturing a semiconductor device as defined in claim 1,  
             further comprising:

             stacking a plurality of the semiconductor substrates which has been subjected to  
             the steps (a) to (d), and electrically connecting the semiconductor substrates through a  
15            plurality of the conductive sections.

             7. The method of manufacturing a semiconductor device as defined in claim 2,  
             further comprising:

             stacking a plurality of the semiconductor substrates which has been subjected to  
20            the steps (a) to (d), and electrically connecting the semiconductor substrates through a  
             plurality of the conductive sections.

             8. The method of manufacturing a semiconductor device as defined in claim 3,  
             further comprising:

25            stacking a plurality of the semiconductor substrates which has been subjected to  
             the steps (a) to (d), and electrically connecting the semiconductor substrates through a  
             plurality of the conductive sections.

9. The method of manufacturing a semiconductor device as defined in claim 4,  
further comprising:

stacking a plurality of the semiconductor substrates which has been subjected to  
5 the steps (a) to (d), and electrically connecting the semiconductor substrates through a  
plurality of the conductive sections.

10. The method of manufacturing a semiconductor device as defined in claim 1,  
further comprising:

10 stacking a plurality of the semiconductor substrates which has been subjected to  
the steps (a) to (d), and electrically connecting the semiconductor substrates through a  
plurality of the conductive sections.

15 11. A semiconductor device manufactured by the method as defined in claim 1.

12. A semiconductor device manufactured by the method as defined in claim 6.

20 13. A circuit board on which the semiconductor device as defined in claim 11 is  
mounted.

14. A circuit board on which the semiconductor device as defined in claim 12 is  
mounted.

25 15. An electronic instrument comprising the semiconductor device as defined in  
claim 11.

16. An electronic instrument comprising the semiconductor device as defined in

claim 12.